

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4073	438/30,48,149,164.ccls.	US-PGPUB; USPAT	OR	ON	2006/07/22 18:43
L2	2884	1 and @ad<"20030728"	US-PGPUB; USPAT	OR	ON	2006/07/22 18:43
L3	8979	430/66,270.1,311.ccls.	US-PGPUB; USPAT	OR	ON	2006/07/22 18:43
L4	7086	3 and @ad<"20030728"	US-PGPUB; USPAT	OR	ON	2006/07/22 18:43
L5	7079	4 not 2	US-PGPUB; USPAT	OR	ON	2006/07/22 18:43
L6	5064	5 and organic	US-PGPUB; USPAT	OR	ON	2006/07/22 18:44
L7	4470	6 and compound	US-PGPUB; USPAT	OR	ON	2006/07/22 18:44
L8	949	2 and organic	US-PGPUB; USPAT	OR	ON	2006/07/22 18:44
L9	444	8 and compound	US-PGPUB; USPAT	OR	ON	2006/07/22 18:44
L10	2	(organic and (water adj soluble) and compound and (exposing or expose) and absorbing and (develope or developing) and (photosensitive or resin) and temperature).clm.	US-PGPUB; USPAT	OR	ON	2006/07/22 18:46

US-PAT-NO: 6159645

DOCUMENT-IDENTIFIER: US 6159645 A

TITLE: Black matrix in color picture tubes and a process for  
producing said black matrix

----- KWIC -----

Claims Text - CLTX (1):

1. A black matrix in color picture tubes, comprising a light-**absorbing** matrix, produced from a positive photoresist composition comprising a suspension which includes

Claims Text - CLTX (2):

one or more **compounds** which indirectly or directly release gaseous **compounds** on exposure to light,

Claims Text - CLTX (5):

an agent for protecting the light-**absorbing** matrix, produced from a negative photoresist composition comprising

Claims Text - CLTX (6):

a **water-soluble organic** polymer,

Claims Text - CLTX (11):

2. The black matrix of claim 1, wherein the **compounds** which release gaseous **compounds** on exposure to light can be transformed into a positive relief.

Claims Text - CLTX (12):

3. The black matrix of claim 1 wherein the gas-releasing **compounds** include polymers or polymers in combination with **photosensitive compounds**.

Claims Text - CLTX (14):

5. The black matrix of claim 4, wherein the nitrogen-releasing **compounds** include azides, bisazides, diazides, azo and diazo **compounds**, heterocycles having at least two adjacent nitrogen atoms, diazirines and/or diazonium salts.

Claims Text - CLTX (15):

6. The black matrix of claim 4, wherein the **compounds** releasing carbon

dioxide include oxazolones, dioxazolones, peroxy-carboxylic acids or esters thereof, diacyl peroxides, photo-decarboxylatable carboxylic acids, carbonic esters and/or carbonic derivatives.

Claims Text - CLTX (16):

7. The black matrix of claim 4, wherein the **compounds** releasing oxygen include **organic** hydroperoxides, **organic** peroxides, dioxetanes and/or ozonides.

Claims Text - CLTX (17):

8. The black matrix of claim 4, wherein the **compounds** releasing aldehydes include polymethylenes or corresponding copolymers or co-condensates.

Claims Text - CLTX (18):

9. The black matrix according to claim 4, wherein the **compounds** releasing CO.sub.2 and hydrocarbons include Boc-substituted, polymeric phenols or phenol **resins**.

Claims Text - CLTX (19):

10. The black matrix of claim 1, wherein the **compounds** which indirectly or directly release gaseous **compounds** on exposure to light have film-forming properties.

Claims Text - CLTX (21):

12. The black matrix of claim 1, further comprising water and/or **organic** solvents.

Claims Text - CLTX (22):

13. The black matrix of claim 1, wherein the suspension further includes a hydrophobized polyhydroxystyrene, and an onium salt photoinitiator **absorbing** light having wavelengths between 250 and 450 nm.

Claims Text - CLTX (23):

14. The black matrix of claim 13, comprising from about 4 to about 15% by weight of the hydrophobized polyhydroxystyrene having a hydrophobization level of at least about 75%, from about 1.5 to about 8% by weight of the black pigment, at least about 0.01% by weight of the onium salt photoinitiator **absorbing** light having wavelengths between 250 and 450 nm in an aqueous dispersing agent.

Claims Text - CLTX (30):

21. The black matrix of claim 1, wherein the suspension further includes surfactants and polyvinylpyrrolidone, and wherein the one or more **compounds**

includes a 4,4'-diazidostilbene-2,2'-disulfonic acid disodium salt.

Claims Text - CLTX (38):

25. A process for producing a light-**absorbing** matrix in color picture tubes by coating the interior screen surface with a photoresist composition, comprising

Claims Text - CLTX (39):

coating the interior screen surface with a photoresist composition comprising a suspension which comprises one or more **compounds** which indirectly or directly release gaseous **compounds** on exposure to light, a black pigment, and suspension-stabilizing, wetting-promoting and/or adhesion promoting additives to form a layer,

Claims Text - CLTX (41):

**exposing** the layer to light having a wavelength of between 250 and 450 nm for structural exposure,

Claims Text - CLTX (42):

**developing** the layer using water having a **temperature** of from about 40 to about 80.degree. C. to form a matrix,

Claims Text - CLTX (45):

26. The process according to claim 25, further comprising pre-**exposing** the layer prior to **exposing** the layer.

Claims Text - CLTX (47):

28. The process according to claim 25, further comprising treating the layer at a **temperature** between about 40 to about 150.degree. C. prior to **developing**.